

# SMWCon Fall 2015

October 28 to 30, Barcelona

Overview and introduction to new semantic extensions

Karsten Hoffmeyer - October 29, 2015

# SMWCon Fall 2015 - New Semantic Extensions

## Overview

- Semantic Breadcrumb Links
- Semantic Interlanguage Links
- Semantic Meta Tags
- Semantic Cite

# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Breadcrumb Links

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## Semantic Breadcrumb Links

- First released in February 2015
  - Created by James Hong Kong (MWJames)
  - Now at version 1.1.0, requires SMW 2.1 or later
- Allows for a breadcrumb navigation:
  - Where am I?
  - How does the page I am on relate to other pages?
- Uses special property “Has parent page”
  - Needed to establish (store) a hierarchy between pages
  - Used for subsequent search for hierarchies between pages

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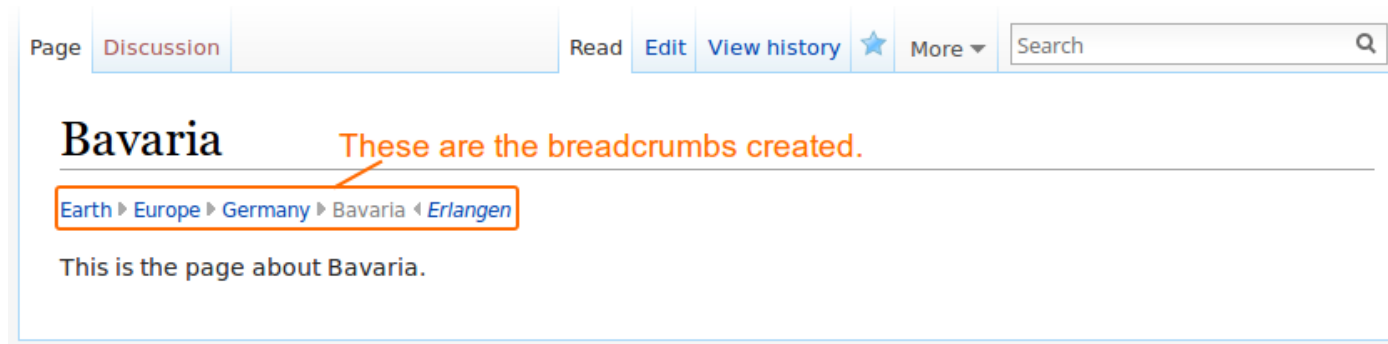
## Semantic Breadcrumb Links

- Example setup:
  - Erlangen, Munich and Passau  
`{{#set:Has parent page=Bavaria}}`
  - Bavaria  
`{{#set:Has parent page=Germany}}`
  - Germany  
`{{#set:Has parent page=Europe}}`
  - Europe  
`{{#set:Has parent page=Earth}}`

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## Semantic Breadcrumb Links

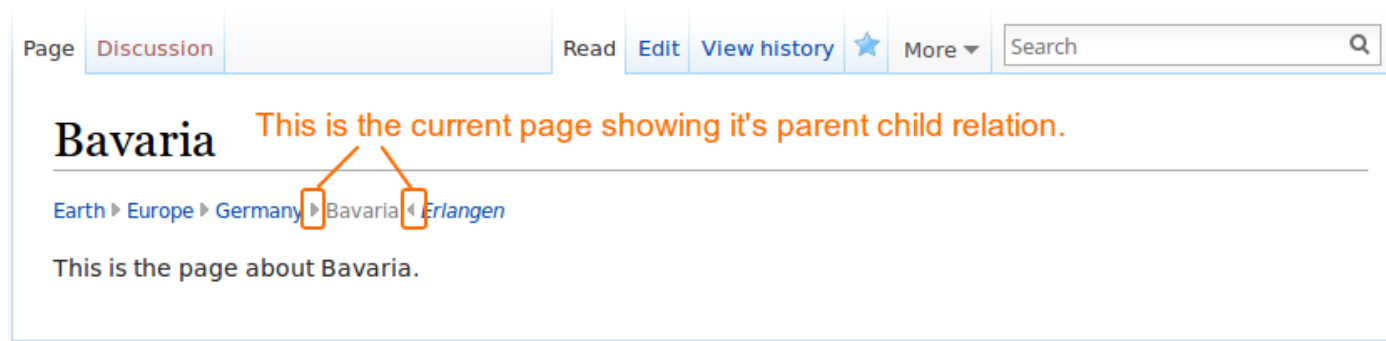
- Example result:



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## Semantic Breadcrumb Links

- Example result:



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## Semantic Breadcrumb Links

- Example result:

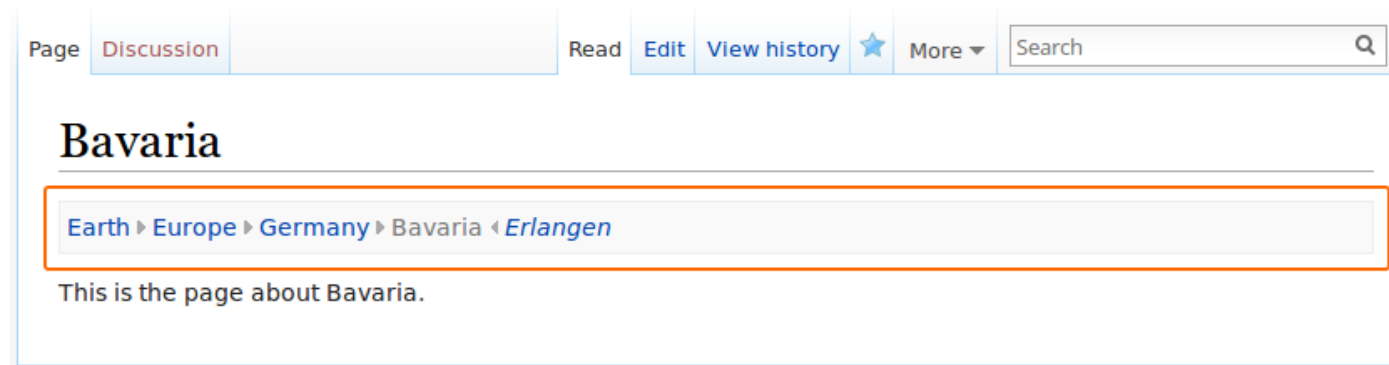




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## Semantic Breadcrumb Links

- Example result: Show the breadcrumbs!



- Different basic styles and divider via configuration parameters, e. g.

```
$egSBLBreadcrumbTrailStyleClass =  
    'sbl-breadcrumb-trail-light-boxed';
```

- further customization via CSS possible

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## Semantic Breadcrumb Links

- Further possibilities
  - Works also for subpage hierarchies
  - Different search patterns for hierarchies per namespace possible
  - Automatic search on namespaces “Property” and “Category”
  - Hierarchy search pattern may also consider (sub)categories

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## Semantic Breadcrumb Links

- Repository

<https://github.com/SemanticMediaWiki/SemanticBreadcrumbLinks>

- Documentation

- /README.md
- /CONFIGURATION.md
- /RELEASE-NOTES.md

- Video

<https://vimeo.com/129347298>

# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Interlanguage Links

# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Interlanguage Links

- First released in February 2015
  - Created by James Hong Kong (MWJames)
  - Now at version 1.1.0, requires SMW 2.1 or later
- Allows for a sitelink navigation as well as a navigation bar between pages based on language relations:
  - Is there a page on the subject in another language?

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## Semantic Interlanguage Links

- Uses parser functions “interlanguagelink” and “interlanguagelist”
  - Needed to create the sitelink navigation and/or navigation bar
- Uses several special properties
  - Needed to establish (store) the language related information.
  - Allows to query the language related information.

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## Semantic Interlanguage Links

- Example setup:
  - Mainz

```
{{interlanguagelist:Mainz|SILTemplate}} // optional
{{interlanguagelink:de|Mainz}} // required
```
  - Mayence

```
{{interlanguagelist:Mainz|SILTemplate}} // optional
{{interlanguagelink:fr|Mainz}} // required
```
  - Magúncia

```
{{interlanguagelist:Mainz|SILTemplate}} // optional
{{interlanguagelink:ca|Mainz}} // required
```

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## Semantic Interlanguage Links

- Example result: Content page



The screenshot shows a Semantic MediaWiki page for 'Magúncia'. On the left is a sidebar with a 'SANDBOX' logo and links for 'Main page', 'Recent changes', and 'Semantic MediaWiki Introduction'. The top navigation bar includes 'Page', 'Discussion', 'Read', 'Edit', 'View history', a star icon, 'More', and a search box. The main content area features the title 'Magúncia' with an annotation: 'Navigation bar created by the "interlanguagelist" parser function.' Below the title is a language navigation bar with 'català', 'Deutsch', and 'français', where 'català' is highlighted with an orange box. The page content begins with 'Aquesta és la pàgina sobre Magúncia.'

In other languages  
Deutsch  
français

—The sitelink navigation created by the "interlanguagelink" parser function.



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## Semantic Interlanguage Links

- Example result: Content page annotation

Browse wiki ? Help

Mainz	
<b>Creation date</b>	24 October 2015 12:40:44 + 🔍
<b>Last editor is</b>	User:Kghbln + ⓘ
<b>Modification date</b>	24 October 2015 12:41:09 + 🔍
<b>Is a new page</b>	false + 🔍
<b>Page creator</b>	User:Kghbln + ⓘ
<b>Page author</b>	User:Kghbln + ⓘ
<b>Number of revisions</b>	2 + 🔍
<b>Page ID</b>	259 + 🔍
<b>Revision ID</b>	547 + 🔍
<b>Has interlanguage link</b>	Mainz#ill.de + ⓘ
hide properties that link here	
Magúncia#ill.ca + ⓘ , Mainz#ill.de + ⓘ , Mayence#ill.fr + ⓘ	
<b>Interlanguage reference</b>	

Pages referring to the canonical language page.

Annotation containing the inter-language information associated with this page.

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## Semantic Interlanguage Links

- Example result: Interlanguage annotation

Browse wiki

[?](#) Help

*Magúncia#ill.ca*

**Page content language** ca + 🔍

**Interlanguage reference** Mainz + ⓘ

hide properties that link here

Magúncia + ⓘ **Has interlanguage link**

Enter the name of the page to start browsing from.

Magúncia#ill.ca

Go

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## Semantic Interlanguage Links

- Special page “Search” extended by language filter

### Search results

Mainz  Results **1 - 4** of **4**

[Content pages](#) [Multimedia](#) [Everything](#) [Advanced](#) [By Language](#)

Filter by Language

**There is a page named "Mainz" on this wiki.** See also the other search results found.

### Page text matches

[Magúncia](#)

```
{{interlanguagelist:Mainz|InterlanguageLinksTemplate}}
```

```
{{interlanguagelink:ca|Mainz}}
```

127 B (14 words) - 14:45, 24 October 2015

# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Interlanguage Links

- Repository

<https://github.com/SemanticMediaWiki/SemanticInterlanguageLinks>

- Documentation

- /README.md
- /RELEASE-NOTES.md
- /docs/01-parser-function.md
- /docs/02-ask-queries.md

- Video

<https://vimeo.com/115871518>

# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Meta Tags

# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Meta Tags

- First released in February 2015
  - Created by James Hong Kong (MWJames)
  - Now at version 1.1.0, requires SMW 2.1 or later
- Allows to add meta elements (“tags”) to the website header thus doing SEO-magic

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## Semantic Meta Tags

- Probably more useful for closed edit wikis
- Supports various “styles”
  - Standard tags
  - Open Graph protocol tags, i.e. og:\*
  - Summary Card tags, i.e. twitter:\*

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## Semantic Meta Tags

- Example setup: variable meta elements

- Configuration

```
$smtgTagsProperties = array(  
    'keywords' => 'Meta element keywords',  
    'description' => 'Meta element description'  
);
```

- Example Page

```
{{#set: Meta element keywords=SMW Project;Semantic  
MediaWiki;scratchpad;sandbox;testsite|+sep=;}}
```

```
{{#set: Meta element description=This is the sandbox wiki  
of the SMW Project and allows you to carry out edit  
experiments with the software.}}
```



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## Semantic Meta Tags

- Example result: Source code of the „Example Page“

```
<!DOCTYPE html>
<html lang="en" dir="ltr" class="client-nojs">
<head>
<meta charset="UTF-8" />
<title>Meta elements (variable) - Semantic MediaWiki - Sandbox</title>
<meta name="generator" content="MediaWiki 1.25.3" />
<meta name="robots" content="noindex,nofollow" />
<meta name="keywords" content="SMW Project,Semantic MediaWiki,Scratchpad,Sandbox,Testsite" />
<meta name="description" content="This is the sandbox wiki of the SMW Project and allows you to carry out edit experiments with the software." />
```

Ignore this! :)

Meta content added via semantic annotation.

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## Semantic Meta Tags

- Example setup: fixed meta elements, e.g. Open Graph protocol
  - Configuration

```
$smtgTagsStrings = array(  
    'og:site_name' => 'Semantic MediaWiki – Sandbox',  
    'og:image' => 'http://sandbox.semantic-  
mediawiki.org/w/SMWSandBoxLogo.png',  
    'og:image:type' => 'image/png',  
    'og:image:width' => '142',  
    'og:image:height' => '142'  
);
```

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## Semantic Meta Tags

- Example result: Source code of the „Example Page“

```
<!-- Open Graph protocol markup -->
<meta property="og:site_name" content="Semantic MediaWiki - Sandbox" />
<meta property="og:image" content="http://sandbox.semantic-mediawiki.org/w/SMWSandBoxLogo.png" />
<meta property="og:image:type" content="image/png" />
<meta property="og:image:width" content="142" />
<meta property="og:image:height" content="142" />
```

# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Meta Tags

- **Repository**

<https://github.com/SemanticMediaWiki/SemanticMetaTags>

- **Documentation**

- /README.md
- /RELEASE-NOTES.md

# SMWCon Fall 2015 - New Semantic Extensions

Semantic Cite

# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Cite

- First release imminent
  - Created by James Hong Kong (MWJames)
  - Requires SMW 2.3 or later
- Allows to manage citation resources using semantic annotations
- Does not require the Cite extension to be installed

# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Cite

### Features

- Adding globally citable notes and references via parser function “#scite” with parameterized information
- Self-added and/or customizable reference list via parser function “#referencelist” which uses different options making it adjustable

# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Cite

### Features

- Individual property annotation and text formatting rules via templates
- In-text reference tooltip
- Bibtex record import support
- Metadata retrieval from selected providers (PubMed, CrossRef etc.) via a special page



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## Semantic Meta Tags

- Example: (simple note)

```
{{#scite:AustraliaRegion  
  |type=misc  
  |citation text=Australia (North Territory, W/C  
Queensland, N/NW West Australia)  
}}
```

# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Meta Tags

- Example: (complex citation)

```
{{#scite:PMID24471188
|type=Journal Article
|title=Analysis of PIK3CA mutations in breast cancer subtypes.
|author=Arsenic R;Lehmann A;Budczies J;Koch I;Prinzler J;Kleine-Tebbe A;Schewe
C;Loibl S;Dietel M;Denkert C|+sep=;
|journal=Applied immunohistochemistry & molecular morphology : AIMM / official
publication of the Society for Applied Immunohistochemistry
|pubdate=2014 Jan
|year=2014
|volume=22
|issue=1
|pages=50-6
|abstract=Phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit  $\alpha$ 
(PIK3CA) is a central element of a signaling pathway involved in cell
proliferation, survival, and growth. [...]
|subject=Adult;Aged;Aged, 80 and over;Base Sequence;Breast Neoplasms
enzymology;Cohort Studies;DNA Primers;Female;Humans;Middle
Aged;Mutation;Phosphatidylinositol 3-Kinases genetics|+sep=;
|pmid=24471188
}}
```

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## Semantic Cite

- `#scite` parameters mappable to a distinct property via system message “Sci-property-definition”

### MediaWiki:Sci-property-definition

---

A list of `#scite` identifiers that are mapped to user-defined properties. Please be aware that changes to existing entries require a rebuild of property assignments.

**parameter**  
foo-id|bar-property  
**type** Has reference type **property**  
author|Has author  
year|Has date  
title|Has title  
journal|Has publisher  
subject|Has subjects  
subjects|Has subjects  
abstract|Has abstract  
url|Has url  
isbn|ISBN

# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Cite

- #scite parameter “type” assigned to a display template via system message “Sci-template-definition”

### MediaWiki:Sci-template-definition

---

A list of citation types that are mapped to predefined templates containing citation formatting rules.

```
foo|type|bar-template
journal|SciteMLACitationFormatter
journal article|SciteMLACitationFormatter
```

property value of property mapped to #scite parameter type

template to be used to show the respective citation

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## Semantic Cite

- Example setup (referencing citation and the display of it)

- Page “PIK3CA mutations”

// The citation as such done via #scite is either on this page, on a subpage to it or anywhere on the wiki.

```
This text is about PIK3CA mutations in breast cancer subtypes.
```

```
[[CiteRef::PMID24471188]]
```

```
<!-- Special property “CiteRef” looks up the citation via the citation key  
which is added as a property value. -->
```

```
{{#referencelist:  
|listtype=ul  
|columns=1  
}}
```

```
<!-- The “#referencelist” parser function supports several parameters to  
control how the citation template is shown. -->
```

# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Cite

- Example result
  - Page “PIK3CA mutations”

The screenshot shows a web interface for a Semantic Cite. At the top, there are tabs: 'Page' (selected), 'Discussion', 'Read', 'Edit', and 'View hist'. To the right of these tabs is a search bar with a magnifying glass icon. Below the tabs, the title 'PIK3CA mutations' is displayed. Underneath the title, a text snippet reads: 'This text is about PIK3CA mutations in breast cancer subtypes.<sup>[1]</sup>'. Below this, there is a 'References' section. A reference is listed: '1 ↑ Arsenic R, Lehmann A, Budczies J, Koch I, Prinzler J, Kleine-Tebbe A, Schewe C, Loibl S, Dietel M, Denkert C. "Analysis of PIK3CA mutations in breast cancer subtypes.". Applied immunohistochemistry & molecular morphology : AIMM / official publication of the Society for Applied Immunohistochemistry 22. (2014): 50-6.' A tooltip is visible over the reference, showing the PMID 'PMID24471188 [+]' and the full citation text.

Page **Discussion** Read Edit View hist

**PIK3CA mutations**

This text is about PIK3CA mutations in breast cancer subtypes.<sup>[1]</sup>

**References**

- <sup>1</sup> ↑ Arsenic R, Lehmann A, Budczies J, Koch I, Prinzler J, Kleine-Tebbe A, Schewe C, Loibl S, Dietel M, Denkert C. "Analysis of PIK3CA mutations in breast cancer subtypes.". Applied immunohistochemistry & molecular morphology : AIMM / official publication of the Society for Applied Immunohistochemistry 22. (2014): 50-6.

PMID24471188 [+]  
Arsenic R, Lehmann A, Budczies J, Koch I, Prinzler J, Kleine-Tebbe A, Schewe C, Loibl S, Dietel M, Denkert C. "Analysis of PIK3CA mutations in breast cancer subtypes.". Applied immunohistochemistry & molecular morphology : AIMM / official publication of the Society for Applied Immunohistochemistry 22. (2014): 50-6.

# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Cite

- Metadata retrieval via special page “FindCitableMetadata”

### Find citable metadata

[? Help](#)

By ID

Please enter an identifier and select an external service (requires an active internet connection) to enable metadata to be mapped to the `#scite` format for the following services:

- DOI to search the CrossRef repository
- OCLC number for the WorldCat catalog
- PMCID for PubMed Central and PMID for the PubMed archive
- OLID or ISBN number to match an OpenLibrary record
- VIAF number to search for a Virtual International Authority File

Type:

PMID ▼

24471188

Search

☐ Raw

# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Cite

- Metadata creation via special page “FindCitableMetadata”

### Find citable metadata

[? Help](#)

By ID

Please enter an identifier and select an external service (requires an active internet connection) to enable metadata to be mapped to the `#scite` format for the following services:

- DOI to search the CrossRef repository
- OCLC number for the WorldCat catalog
- PMCID for PubMed Central and PMID for the PubMed archive
- OLID or ISBN number to match an OpenLibrary record
- VIAF number to search for a Virtual International Authority File

Type: PMID   ☐ Raw

### Log

- The ID has been matched to the following [pubmed:↑] citation resources.
- The search response was fetched from cache.

### Result

```
{#scite:PMID24471188
  type=Journal Article
  title=Analysis of PIK3CA mutations in breast cancer subtypes.
  author=Arsenic R;Lehmann A;Budczies J;Koch I;Prinzler J;Kleine-Tebbe A;Schewe C;Loibl S;Dietel M;Denkert C|+sep=;
  journal=Applied immunohistochemistry & molecular morphology : AIMM / official publication of the Society for Applied Immunohistochemistry
  pubdate=2014 Jan
  year=2014
  volume=22
  issue=1
  pages=50-6
  abstract=Phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit α (PIK3CA) is a central element of a signaling pathway involved in cell proliferation, survival, and growth. Certain mutations in this pathway result in enhanced PI3K signaling, which is associated with oncogenic cellular transformation and cancer. The aims of this study were to characterize different types of PIK3CA mutations in exons 9 and 20 in a series of primary breast carcinomas and to correlate the results with clinicopathologic parameters and survival. We used frozen tissue samples and sequenced exons 9 and 20 for a series of 241 patients with a diagnosis of breast carcinoma. We found that 15.8% of the primary breast carcinomas possessed PIK3CA mutations in either exon 9 or exon 20. The rate of PIK3CA mutations was increased in HR(+)/HER2(-) tumors (18.6%), but this difference did not reach a statistical significance. The lowest rate of mutations was observed in HR(+)/HER2(+) tumors (5.3%). No statistically significant association was found between the presence of PIK3CA mutations and the prognostic/clinical features of breast cancer, including histologic subtype, Her2 status, axillary lymph node involvement, tumor grade, and tumor stage. However, the presence of the H1047R mutation in 10 samples was associated with a statistically significantly worse overall survival. PIK3CA mutation was found to be a frequent genetic change in all breast cancer subtypes but occurred with the highest rate in HR(+)/HER2(-) tumors. Further studies are needed to validate the prognostic impact of different PIK3CA mutations.
  subject=Adult;Aged;Aged, 80 and over;Base Sequence;Breast Neoplasms enzymology;Cohort Studies;DNA Primers;Female;Humans;Middle Aged;Mutation;Phosphatidylinositol 3-Kinases genetics|+sep=;
  pmid=24471188
}
```

Create a citing resource  
manually or automatically



# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Cite

- **Repository**

<https://github.com/SemanticMediaWiki/SemanticCite>

- **Videos**

[https://www.youtube.com/playlist?list=PLIJ9eX-UsA5eI\\_YFdn6HeO2Dcta4CrPzX](https://www.youtube.com/playlist?list=PLIJ9eX-UsA5eI_YFdn6HeO2Dcta4CrPzX)

# SMWCon Fall 2015 - New Semantic Extensions

## Semantic Cite

- Documentation
  - /README.md
  - /CONFIGURATION.md
  - /RELEASE-NOTES.md
  - /docs/01-introduction.md
  - ...
  - /docs/09-notes.md